

Application No. 10/698,230
Amendment dated March 23, 2007
Reply to Office Action of February 26, 2007

Docket No.: 2000.615 USRD2

AMENDMENTS TO THE CLAIMS

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1-23. (Cancelled)

24. (Withdrawn) A method for removing suspended particles from a soluble protein solution comprising the step of filtering the soluble protein solution through highly purified diatomaceous earth, thereby providing a clarified soluble protein solution, wherein the highly purified diatomaceous earth has been leached to remove soluble impurities, has a total SiO₂ content of at least about 95% and a silica specific volume of greater than about 3.4.

25. (Withdrawn) The method of Claim 24, wherein the soluble protein solution is a secreted protein solution.

26. (Withdrawn) The method of Claim 25, wherein the soluble protein solution is a lysate.

27. (Withdrawn) The method of Claim 26, wherein the lysate is a bacterial lysate.

28. (Withdrawn) The method of Claim 26, wherein the lysate is a bacterial lysate containing a heterologous protein that was obtained by expression in bacteria.

29. (Withdrawn) The method of Claim 24, further comprising the step of stirring the soluble protein solution with a highly purified diatomaceous earth before filtering through a filter press.

30. (Withdrawn) The method of Claim 24, wherein the yield of the soluble protein solution is between about 95% and about 100%.

31. (Withdrawn) The method of Claim 24, wherein the highly purified diatomaceous earth is CELPURE.

32. (Withdrawn) The method of Claim 27, wherein the bacteria is *E. coli*.

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33. (Previously Presented) The method of Claim 28, further comprising the step of blocking cysteine residues of the heterologous protein.

34. (Previously Presented) The method of Claim 33, wherein the cysteine residues are blocked with an oxidizing agent.

35. (Previously Presented) The method of Claim 34, wherein the oxidizing agent comprises sodium sulfite.

36. (Previously Presented) The method of Claim 34, wherein the oxidizing agent comprises sodium tetrathionate.

37. (Previously Presented) The method of Claim 34, wherein the oxidizing agent is a 2:1 ratio mixture of sodium sulfite and sodium tetrathionate.

38. (Previously Presented) The method of Claim 34, wherein the oxidizing agent is added to the protein solution at a pH of between about 7.8 and about 8.2.

39. (Withdrawn) The method of Claim 33, further comprising the step of deblocking the blocked cysteine residues.

40. (Withdrawn) The method of Claim 39, wherein the blocked cysteine residues are deblocked with a reducing agent.

41. (Withdrawn) The method of Claim 39, wherein the blocked cysteine residues are deblocked with dithiothreitol.

42. (Withdrawn) The method of Claim 28, further comprising resolubilizing refractile bodies in the lysate.

43. (Withdrawn) The method of Claim 28, in which the heterologous protein is SY161, wherein SY161 has an amino acid sequence as shown in SEQ ID NO 1.